CLAIMS

1. A terminal for generating an electromagnetic field adapted to cooperating with at least one transponder when the latter enters within said electromagnetic field and including an oscillating circuit adapted to receiving a high frequency A.C. excitation voltage, including:

means for regulating the signal phase in the oscillating circuit with respect to a reference value;

means for determining an instantaneous relative to the magnetic coupling between the transponder and the terminal; and

means for adapting the electromagnetic field power according to at least said instantaneous information.

2. The terminal of claim 1, including means for measuring a first quantity which is a function of the voltage across a capacitive element of said oscillating circuit and a second quantity which is a function of the current in said oscillating circuit.

3. The terminal of claim 1, including means for determining and storing characteristic information relative to the coupling in several determined configurations of the distance separating the transponder from the terminal, and for taking account said characteristic information in the field power adaptation according to the instantaneous information.

4. The terminal of claim 3, wherein said characteristic information includes, among others:

the voltage across the capacitive element when no transponder is present in the field of the terminal;

the voltage across the capacitive element when a transponder is in a relation of maximum closeness with the terminal;

the current in the oscillating circuit when no transponder is present in the field of the terminal; and

the current in the oscillating circuit when a transponder is in a relation of maximum closeness with the terminal.

5. The terminal of claim 4, wherein said instantaneous information is deduced from the instantaneous measurement of said two quantities and of the values of said characteristic information.

6. The terminal of claim 3, wherein at least one characteristic information is automatically determined by the terminal in a learning phase.

7. The terminal of any of claim 1, wherein the means for adapting the power of the electromagnetic field include means controllable to modify the A.C. excitation voltage of the oscillating circuit of the terminal.

8. The terminal of claim 1, wherein the means for adapting the power of the electromagnetic field include one or several controllable resistive elements, belonging to the oscillating circuit of the terminal.

9. The terminal of claim 1, wherein the response time of the phase regulation means is chosen to be large as compared to the frequency of a possible back-modulation coming from a transponder present in the electromagnetic field of the terminal and to be fast as compared to the displacement speed of a transponder in this electromagnetic field.

10. The terminal of claim 1, wherein said oscillating circuit includes an element of variable capacitance, said terminal including means adapted to determining the value of this capacitance based on a phase measurement on the signal in the oscillating circuit by varying the voltage across the element of variable capacitance.

11. A method for controlling the terminal of claim 1, comprising the steps of:

a) during a learning phase:

determining a first characteristic information associated with the current in the oscillating circuit when no transponder is present in the field of the terminal;

determining a second characteristic information associated with the current in the oscillating circuit when a transponder is in a relation of maximum closeness with the terminal;

calculating linear relations of control of the magnetic field power according to said current information and to a predetermined nominal value; and

b) in operation:

determining the instantaneous information associated with the coupling between a transponder that has entered the terminal's field and said terminal; and

adapting the magnetic field power based on said linear relations.

12. The method of claim 11, wherein said current information is a function of the ratio between an instantaneous magnetic coupling coefficient and the maximum magnetic coupling coefficient obtained when a transponder is in a relation of maximum closeness with the terminal.